



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/651,979 | 08/31/2000 | Adrian Shields | 8490.00 | 3073 |

7590 02/26/2004

Michael Chan
Intellectual Property Section
Law Department NCR Corporation
101 West Schantz ECD-2
Dayton, OH 45479-0001

EXAMINER

MEISLAHN, DOUGLAS J

ART UNIT PAPER NUMBER

2137

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/651,979

Applicant(s)

SHIELDS, ADRIAN

Examiner

Douglas J. Meislahn

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 1 and 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because elements 10, 14, 26, 28, 50, 52, 54, 56, and 58 need labels. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1-3 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Single means claims are not enabled. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983).

Art Unit: 2137

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 5, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Little et al. (WO 97/04395).

In their abstract, Little et al. teach a portable electronic data module for secure transactions. The module generates keys based on data stored internally. The recitation of secure transactions anticipates that the keys are unique to transactions. As such, the means of claim 1 is anticipated. Use of the real-time clock described in the abstract anticipates the first clause of claim 5, while the key generation anticipates the second. Element 10 in figure 1 anticipates the self-service terminal in claim 10. The other elements of claim 10 are anticipated by the previous discussion of the module.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2137

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Little et al. in view of Chaum (4529870).

Little et al. present a portable module that generates its own keys. They do not say that the keys are generated when a transaction is executed. In lines 3-7 of column 12, Chaum says that it is preferable to generate a key each time a transaction is performed so as to minimize the amount of unencrypted data in the card. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to generate the keys of Little et al. when a transaction is executed as taught by Chaum in order to minimize risk.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Little et al. in view of McNair (5278905).

Little et al. present a portable module that generates its own keys. He does not say that the keys are based on time and date settings. In lines 28-40 of column 4, McNair teaches combating replay attacks by creating keys partly from time and date information. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate McNair's replay protection method in Little et al. by basing keys on time and date information.

10. Claims 4, 6-9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Little et al. in view of Schneier (*Applied Cryptography*).

Little et al. present a portable module that generates its own keys. They do not say that a unique challenge is created based on the same value or how their keys are used. On page 63, Schneier describes the Denning-Sacco

Art Unit: 2137

protocol, which both authenticates an entity and provides a random symmetric key. In the protocol, a user Alice, who corresponds to applicant's portable terminal, generates and sends a key and timestamp to Bob, who corresponds to applicant's self-service terminal. The timestamp coupled with the participants' names anticipates applicant's challenge. As described with respect to Little et al., the key is based on a real-time clock; timestamps would also be based on the real-time clock. As such, the key and the challenge are based on the same sequence of values. This system provides authentication of Alice and a symmetric key for the two parties. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the Denning-Sacco protocol into the communications of Little et al.'s module in order to provide a symmetric key and authentication.

With respect to claims 9 and 11, Schneier teaches authenticating Bob in the DASS protocol on page 62 by Bob creating a new challenge, encrypting it with the symmetric key, and returning the new cryptogram to Alice.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (703) 308-4789.

Art Unit: 2137

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Douglas J. Meislahn
Examiner
Art Unit 2137

DJM